

ASPLENIUM TRICHOMANES L.

Shaded limestone, but sometimes on sandstone or granite; frequent.

Often associated with the last species. The fronds are evergreen, varying in size and crenation of the pinnae.

ASPLENIUM PYCNOCARPON Spreng.

Moist rich woods; rare. Aug.—Sept.

Blue Mt., Hamilton Co., 3700 feet (Miss E. G. Knight). Bull. Torr. Bot. Club **20**: 459. Dec. 1893; Mt. Hope, Putnam mountains; Ray farm woods, Welch Hollow; Caldwell's and Devine's woods near Kingsbury.

This fern was formerly known as *A. angustifolium*: and is readily recognized by its once pinnate fronds.

ASPLENIUM RUTA-MURARIA L.

Limestone cliffs; very rare.

A few plants in a little pocket of a cliff, about one mile northwest of schoolhouse No. 8, northwest Hartford, Aug. 3, 1899; July 27, 1900, and Aug. 23, 1901; Skenes Mt., Whitehall, a few plants, Aug. 30, 1900.

HUDSON FALLS, N. Y.

(to be concluded)

Notes and News

Maxonia, a new genus of ferns. Carl Christensen, *Smithson. Misc. Coll.* **66**: no. 9. pp. 1-4. 30 Sept. 1916.

The new genus, *Maxonia*, is based on a single species, *Polystichum apiifolium* (Sw.) C. Chr. Ind. Fil. which is indicated as intermediate between *Dryopteris* and *Polybotrya*. From *Dryopteris* it differs in having dimorphic leaves, a creeping rhizome, a different type

of pubescence, and peculiarly developing indusium. From *Polybotrya*, it differs in having the sporangia confined to the backs of veins, in possessing an indusium and in being less dimorphic than true *Polybotrya*.

The single species included is found in its typical state in Jamaica and Cuba. From Guatemala material has been collected which is recognized as a variety.

R. C. B.

“THE TREE FERNS OF HAWAII.” Under this title, Vaughan MacCaughey has an interesting account¹ of the three species of tree ferns native in the Hawaiian Islands, with some discussion of tree ferns in general. The three kinds all belong to the genus, *Cibotium*, which also furnishes in the form of a Central American species, *C. Schiedeii*, the most common tree fern in cultivation.

The article gives special account of the economic value of the Hawaiian tree ferns. The trunks of the larger kinds are used to build corduroy roads through swampy places, a fact already noted by Maxon in his article on American tree ferns.² Rude fences are sometimes made by piling sections of trunks together. Florists use them, as elsewhere, as the matrix upon which to grow various epiphytic plants such as orchids. Here in the United States where tree fern trunks are not available, the orchid grower makes use of the black root masses of the *Osmundas*.

The rootstock and petiole scales of the Hawaiian tree ferns are very abundant, and under the name of *pulu*, have a considerable sale as mattress and pillow stuffing. At one time this sale was much greater than at present. Its sale in the United States was accelerated by special agents who would inquire on registering at a hotel

¹ Am. Bot. 22: 1-9. June, 1916.

² Smithsonian. Rep. 1911: 463-491. pl. 1-15.

whether there were pulu mattresses available. On receiving a negative reply the prospective guest would pass on, leaving the proprietor to consider the advisability of installing a few. Experience showed, however, that pulu mattresses were not long lived and the export soon fell off.

Perhaps the most interesting single fact about these ferns has to do with their use as food. The center of the trunks is starchy and in times of famine has served as human food. Nowadays they cook the trunks in the volcanoes and serve them to the pigs.

R. C. B.

LORQUINIA. *Lorquinia* is a new publication, started in 1916 by the Lorquin Natural History Club of which our member, Mr. Moxley, is one of the interested and active members. Originally organized as a boys' natural history club, the Club has since come to include older members, but it has retained the original broad interests of the earlier organization. Its scope may be judged by the following titles, taken at random: Desert reptiles; A rare cat-tail; Egg-cases of some local mollusca; The study of variation; Palaeontology—its place in the study of natural history; The genus *Quercus* in California. Among the author's names are the following: E. E. Hadley, E. P. Chace, R. R. Gates, R. A. May, F. Grinnell, Jr., and Cecil Hart.

Altogether, the publication seems to be very well worth while, and is particularly to be recommended to those interested in general natural history, both adults and younger people.

Lorquinia is sent free to members. For further information, address Rev. Geo. L. Moxley, 444 South Spring Street, Los Angeles, or the editor of *Lorquinia*, Mr. Paul D. R. Rütthling, 1051 W. 23rd Street, Los

Angeles, Cal. So far, five eight page numbers have been issued.

A NEW VERMONT STATION FOR ASPLENIUM EBENOIDES. We, my wife and I, began fern hunting last Summer (1915). We spent the month of July at No. Ferrisburg, Vt.—Mt. Philo Inn. This summer (1916) we decided to stay there during July and August because we agreed with Mr. H. G. Rugg that "Vermont is the Fern Lovers' Paradise."

Two miles east of Mt. Philo, in the southeastern corner of Charlotte is Scott's Mill, and just above this mill runs a wooded range of hills. On the western slope of this range, Mrs. Breckenridge had the good fortune to find, on July 29, two fine plants of *Asplenium ebenoides*.

We picked four fronds, one that had evidently survived the Winter. They were from 5 to 7 inches long and each one gave unmistakable evidence of its parentage.

Near by, growing in profusion, was *Camptosorus rhizophyllus* also at least twenty-five specimens of *Asplenium platyneuron*. These plants we had discovered last summer, and we went to the station determined to find our Scott's Spleenwort. I wonder if the name of that mill helped any.

L. P. BRECKENRIDGE.

Mr. A. W. Brown sends in some additions to Dr. Benedict's list of Adirondack ferns, recently published in the JOURNAL. "I was there" he writes "in August of this year and last and, like Dr. Benedict, found so many attractions that I did not look very closely for specimens, but can add to the list *Struthiopteris germanica*, *Botrychium obliquum* and *Dryopteris marginalis* (on Bald Mountain). The region does not seem specially rich

in ferns, but in a very uncanny looking swamp with immense boulders between Old Forge and Bald Mountain I found by far the finest plants of *Polypodium vulgare* and *Dryopteris Dryopteris* I ever saw, and I have found lots of them in England, Scotland, Wales, France, Canada and the United States."

AMERICAN FERN SOCIETY

The Brooklyn Meeting

A meeting of the Society was held, as announced, at the Brooklyn Botanic Garden on the afternoon and evening of December 29th, in connection with the American Association for the Advancement of Science. Thirty-one persons, members and their friends, registered as present. The authorities of the Garden received us hospitably and provided for us a convenient lecture-room with plenty of wall and table space for exhibits.

The afternoon was spent in visiting, under guidance of Dr. Benedict, the many points of interest at the Garden. First came the conservatories, where winter instruction in horticulture for public school children was going on. The conservatories contain a considerable number of economic plants and in them Dr. Benedict has gathered what is undoubtedly the largest collection in the world of the different forms of the Boston fern. These show an astonishing range of variation, with fronds plane or ruffled, one- to five-pinnate and three or four inches to six feet in length. Next was a cold, but interesting walk about the out-door portion of the Garden. We visited the Japanese garden, planned and constructed by Japanese experts; the rockery; the local flora garden in which it is planned to have growing representatives of all species found wild within 100 miles of New York City; and last, but far